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INSTITUTE

Sustainable Solutions to Protect Our Environment

**DRAFT FINAL
ELEMENTS OF A
MODEL STATE THERMOSTAT PROGRAM
January 29, 2007**

Through seven conference calls held in the fall and winter of 2006 involving a range of participants (see appendix), the Product Stewardship Institute facilitated the following agreement on 11 components considered important for a comprehensive program to maximize recycling of existing mercury thermostats and to minimize or eliminate the future sales of mercury thermostats. The participants that developed this model program believe that the best approach is one that is comprehensive and includes each of these 11 elements. Where more than one option is provided for a particular element, this model provides the best starting point for discussions as to the appropriate option for a particular state.

(1) DEFINITION OF THERMOSTAT: Define thermostat to include measuring control devices governing ambient room temperature, and to exclude devices controlling temperatures of industrial processes.

Proposed Definition: For the purposes of this subsection, a "mercury-added thermostat" means a product or device that uses a mercury switch to sense and control room temperature through communication with heating, ventilating, or air-conditioning equipment. "Mercury-added thermostat" includes thermostats used to sense and control room temperature in residential, commercial, industrial, and other buildings, but does not include a thermostat used to sense and control temperature as part of a manufacturing process.

(2) NEW SALES: A prohibition on the sale of new mercury thermostats with the effective date being one year from enactment of the legislation, which covers two peak sales periods (spring and fall). This timeframe balances the desire to end (as soon as possible) the distribution of new mercury thermostats, which will eventually require collection, while allowing existing inventories to be sold. Another option considered was that the effective date could be a date certain, such as January 1 or July 1 of the year following legislative enactment. However, this option did not allow enough time for contractors and wholesalers to sell existing inventories.

Manufacturers should be allowed to ship to a wholesaler with a distribution center servicing many states, even if that center is in a state that prohibits the sale of mercury thermostats. The intent is that the wholesaler could transfer thermostats to its stores in states *without* the ban, but could not sell retail in the state *with* a ban or initiate a sale *from* a state with a ban.

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(3) MANUFACTURER COLLECTION REQUIREMENT: All thermostat manufacturers that ever sold mercury thermostats in the state must develop and implement a collection program for mercury thermostats in that state. A manufacturer's obligation can be satisfied through either a new or existing program, individually, or collectively. The program must cover contractors and homeowners, must be free for them to participate, and must provide a financial incentive to encourage contractors and homeowners to recycle their mercury thermostats. Manufacturers would be allowed to charge an initial \$25 collection box fee, as currently required by TRC to participate in the industry program. There was a strong preference for collection sites to pay the one-time fee as a way for them to take ownership over the collections. The manufacturer would cover the cost of replacement boxes (when the initial box is full and shipped for recycling) and all other transportation and recycling costs. The *manufacturer* is defined as the brand name owner on the thermostat. The programs will be developed in phases, with the contractor program going first due to the higher volume of thermostats involved and greater experience in collection. The homeowner program will be implemented in the second phase.

Nature and Amount of Financial Incentive: There are three options regarding how specific the statute should be regarding the nature and amount of the financial incentive:

1. Statute is specific as to minimum value of the financial incentive, but not as to type (cash vs. rebate).
2. Statute is specific as to both the minimum amount and the type of the incentive.
3. Details of the amount and the type of the incentive are deferred to an administrative/stakeholder process, perhaps with statutory factors that the state agency must consider. (Note: State law may dictate whether, and under what circumstances, an agency can be delegated this kind of authority).

If the Legislature intends to decide this question, one of the first two options must be chosen. If the Legislature elects to delegate this decision to the state agency, then the third option is recommended. This model program proposes both options in recognition that state legislatures have different preferences regarding the degree of authority they typically delegate to agencies.

Consequences of Manufacturer Non-Compliance: If a manufacturer does not comply with the requirement to participate in a collection program, the following two options are proposed, with a strong preference for Option 2. Since an agency always has enforcement authority (Option 1), this fact does not have to be reiterated on the thermostat legislation.

1. Fines and penalties against the non-compliant manufacturer or retailer.
2. Prohibition against the sale of any thermostat in the state by the non-compliant manufacturer.

Implementing the Manufacturer Collection Program: The following two options are recommended to implement the manufacturer collection program(s):

1. One state program plan is developed by the state agency, in consultation with stakeholders. Manufacturers must comply with specified requirements of the program plan by a date certain. [EXAMPLE: Maine law]
2. The manufacturer(s) proposes a program plan, triggering an administrative agency review and approval process (perhaps in conjunction with a formal stakeholder process). Plans can be submitted individually or collectively. [EXAMPLE: Pennsylvania bill]

Maine's law incorporates Option 1 because the state agency was concerned that each manufacturer could submit its own plan, which might lead to 4 or 5 different and complicated programs. Pennsylvania's bill went with Option 2, which will allow for different programs. However, to ensure effective programs, the state will establish acceptable criteria that a manufacturer would have to meet, and these criteria will be much like how the TRC program now operates. Both options have been proposed so that state agencies may choose the route that best suits their needs, since both routes will get to the same place.

(4) HOMEOWNER COLLECTION

- (a) Manufacturers should be required to make their collection program available to household hazardous waste (HHW) and Universal Waste (UW) facilities servicing homeowners. Based on a successful 2006 five-state pilot project conducted by PSI, TRC has agreed to collect mercury thermostats at all eligible HHW facilities in the country in 2007.
- (b) The state environmental agency should be authorized to identify HHW or UW collection centers that should (or should not) have collection boxes, based on safety or other appropriate concerns. This model program proposes that eligible facilities include those that:
 - Provide a minimum level of training (e.g., 24-hour OSHA health and safety training with annual refreshers);
 - Are staffed so that residents do not place the thermostat in the bin, but this is done by staff; and
 - Have no history of enforcement problems.
- (c) Regarding homeowner collection mechanisms, require a stakeholder process that will develop additional collection options for homeowners (besides HHW collection), but provide broad statutory authority to the state agency to select the most appropriate options. Currently, we do not have enough data to know which homeowner collection options will be most successful.

(5) WHOLESALE RESPONSIBILITIES: Wholesalers should be required to participate in the manufacturer collection program as a collection center and/or to provide public education.

(6) RETAILER RESPONSIBILITIES: At a minimum, retailers should be required to provide information on why it is important to manage mercury thermostats properly, and where or how a person could recycle their thermostat. Even if a retailer is not selling mercury thermostats, they are still selling thermostats that replace the mercury ones. The homeowner collection stakeholder process will determine other appropriate retailer responsibilities.

(7) DISPOSAL BAN/ENFORCEMENT: Expressly require the recycling of mercury thermostats for HVAC contractors, demolition contractors, and homeowners. A Minnesota law requires contractors conducting work in a household to remove mercury thermostats after completing the job and not leave it with the household. Contractors are deemed to be more experienced in managing mercury thermostats than homeowners. Fines and penalties for non-compliance should include the default penalty amount in state statute. The effective date of the requirement should be consistent with the effective date of the manufacturer collection program phases.

(8) PROFESSIONAL LICENSING FOR HVAC TECHNICIANS: In states with a professional licensing requirement for HVAC technicians, a condition of licensing should be that

the contractor recycle mercury thermostats. The licensing agency should be given authority to enforce the program, and should be given a stakeholder/education role in developing the model.

(9) EDUCATION AND OUTREACH: Education and outreach to wholesalers, contractors, and homeowners must be improved to make the collection program successful. The primary responsibility for developing and implementing an overall education and outreach plan can reside with either the manufacturer(s) or the state agency, and this model proposes both options. In either case, this model recommends that a stakeholder group help develop the education and outreach plan. Information dissemination mechanisms that should be considered in such a plan include new thermostat package labels or inserts, websites, toll-free numbers, and wholesaler signage.

(10) PERFORMANCE GOALS/EVALUATION AND ADJUSTMENT PROCESS: The statute should specify the performance goals for the program. The performance goals written into the Maine law and Pennsylvania bill are examples of how performance goals can be derived. The best performance standard is based on capture rate, which is the percentage of collected thermostats compared to the estimated percentage of mercury thermostats coming off the wall. The state agency can be charged with the responsibility of estimating the number of mercury thermostats potentially available for collection annually. The state agency should convene a stakeholder group to provide input into this process. Most importantly, if performance goals are not substantially achieved, the state agency should be provided with the authority to change certain program variables, such as the size and nature of the incentive, the approach to collecting thermostats from homeowners, and other program refinements as needed in an attempt to improve program performance.

Aside from capture rates, two other types of performance goals were considered. One option would be based on an annual percentage improvement over the previous year. This option provides greater certainty, since it is based on the actual number of thermostats collected. However, it does not provide the context needed in relation to the universe of mercury thermostats that need to be recycled. A second option would base the performance goal on the actual number of thermostats collected in the best performing programs in the United States, and stretch that goal over time so that all lower performers move toward higher rates. Again, while this option provides greater certainty in that actual data are used, it was considered a less useful approach than a percentage rate, which is more meaningful to the public and a more relevant measure of the extent to which mercury is escaping the collection system.

(11) PROGRAM REPORTING REQUIREMENTS: Manufacturers should be required to periodically report the collection program results to the state agency. Data should be posted on the agency's website and annually evaluated against program performance goals.

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VT	Environmental Groups	Mercury Policy Project/Zero Mercury Working Group	Michael Bender	Bender
VA	HVAC Contractors	Plumbing, Heating, Cooling Contractors (PHCC)	D.L. "Ike" Casey	Casey
	PSI	Product Stewardship Institute, Inc. (PSI)	Scott Cassel	Cassel
	Retailers	Lowe's Companies, Inc.	Michael Chenard	Chenard
ME	State Agencies	ME Department of Environmental Protection	Carole Cifrino	Cifrino
VA	HVAC Contractors	Air Conditioning Contractors of America (ACCA)	Wesley Davis	Davis
CA	State Agencies	CA Integrated Waste Management Board	Cynthia Dunn	Dunn
OH	HVAC Contractors	Heating, Airconditioning & Refrigeration Distributors International (HARDI)	Don Frenenberg	Frenenberg
MN	State Agencies	MN Pollution Control Agency	John Gilkeson	Gilkeson
CA	State Agencies	CA Department of Toxic Substances Control	Peggy Harris	Harris
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